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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,695	12/17/2001	Hiroshi Kume	31762-177289	6299

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EXAMINER	
KNOLL, CLIFFORD H	

ART UNIT	PAPER NUMBER
2112	

DATE MAILED: 01/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/015,695	KUME ET AL.	
	Examiner	Art Unit	
	Clifford H Knoll	2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 December 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-12, 18-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-12 and 18-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/31/02, 10/20/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is responsive to communication filed 12/22/04. Currently claims 2-12 and 18-23 are pending.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Information Disclosure Statement

Applicant has submitted an information disclosure that was received on 10/20/04; however, this disclosure duplicates citations of a previous information disclosure which was received 1/31/02. Examiner has considered both disclosures in this Office Action but indicates duplicate citations in the later disclosure. Copies of both disclosures are attached.

Claim Rejections - 35 USC § 103

1. *Claims 18, 2-8, and 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore (US 6378011) in view of widely known techniques, as evidenced by Firoozmand (US 5210749).*

Regarding claims 18, 19, and 23, Moore discloses a transmission buffer circuit (e.g., col. 3, lines 39-41) with first write and read pointers (col. 6, lines 30-31); a reception buffer circuit (e.g., col. 3, lines 39-41) with second write and read pointers

(col. 7, lines 20-22); monitoring circuits that generate trigger signals (e.g., col. 10, lines 39-44); and an interrupt circuit providing the host with the interrupt signal to cause data to be transmitted (e.g., col. 7, lines 44-50). Moore does not explicitly disclose the details of a difference between write and read count signals; however Examiner takes Official Notice that using a pointer difference to compare against a threshold is a widely used technique for determining if a threshold has been reached, as evidenced by Firoozmand (e.g., col. 9, lines 50-55, col. 5, lines 18-21). It would have been obvious to combine the widely used technique with Moore, because use of pointers provides a convenient means determine the amount of data in a structured buffer, such as a FIFO. Therefore, it would have been obvious to one of ordinary skill in the art to combine Moore with a widely used technique, to obtain the claimed invention.

Regarding claims 2 and 20, Moore also discloses even when data has been transmitted from said transmission buffer circuit, said buffer control circuit assigns priority to an operation of said buffer monitoring circuit that indicates that data is being transmitted and inhibits the interrupt signal from being sent to said interrupt circuit (e.g., col. 7, lines 48-50).

Regarding claims 3 and 4, Moore also discloses wherein said buffer control circuit includes said buffer monitoring circuit (e.g., col. 7, lines 44-47).

Regarding claims 5-8, Moore also discloses wherein said communication terminal is included in a radio device that performs radio transmission (e.g., col. 3, lines 33-35).

Regarding claims 21 and 22, Moore also discloses the host performing other task processing while transmitting and generating (e.g., col. 7, lines 25-26).

2. *Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore as applied in respective claims above, in view of well-known use of a particular radio communications standard, as evidenced by Bridgelall (US 6717516).*

Regarding claims 9-12, Moore discloses the communications terminal as applicable to radio devices, but neglects to mention the particular instance of a Bluetooth communication standard. However, the Examiner takes Official Notice that Bluetooth is a well-known standard for radio communication and is well known to advantageously provide flexible communications for a variety of wireless devices, and it would be obvious to use this standard in the instance of the communication terminal of Moore. This is evidenced by Bridgelall, who teaches the general acceptance and advantageous use of the Bluetooth standard for a variety of wireless devices (e.g., col. 3, lines 52-56) and in particular in communications equipment using transmit FIFOs (e.g., col. 7, lines 30-31). Therefore, it would have been obvious to combine a well-known radio communications standard with Moore's communications terminal for radio devices to obtain the claimed invention.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection. Nonetheless the following response is provided to clarify certain features found in Moore that are relied upon in the rejection.

Regarding claim 18, and similarly in claims 19 and 23, Applicant argues that Moore "fails to teach or even suggest first and second read pointers, and first and second write pointers as featured in claim 18, and fails to minimize the period of time in which nothing is transmitted" (p. 16); however, these features, parts of which are newly introduced by amendment, are in fact shown by Moore. Moore shows reading and writing bytes to a 128 byte deep FIFO, which necessarily implies the requisite set of pointers for accessing such a structure for reading and writing ("the Tx FIFO Register 103 immediately writes the byte to the 128x8 Tx FIFO 104" at col. 6, lines 30-31; see also col. 7, lines 20-22).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clifford H Knoll whose telephone number is 571-272-3636. The examiner can normally be reached on M-F 0630-1500.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark H Rinehart can be reached on 571-272-3632. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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